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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/889,254	02/01/2002	Michael Stanford Showell	CM2003F	2507

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[REDACTED] EXAMINER

KUMAR, PREETI

[REDACTED] ART UNIT [REDACTED] PAPER NUMBER

1751

DATE MAILED: 07/07/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.	Applicant(s)	
09/889,254	SHOWELL ET AL.	
Examiner	Art Unit	
Preeti Kumar	1751	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) Responsive to communication(s) filed on 01 February 2002.
- 2a) This action is FINAL.                  2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-10 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 8.
- 4) Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_ .
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_ .

## DETAILED ACTION

1. Claims 1-10 are pending.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nicholson et al. (US 5,837,663) in view of Bettoli et al. (US 6,440,911).

Nicholson et al. teach a solid detergent composition useful for machine dishwashing. The product contains a first layer having a buffering system, a builder and an enzyme. Enzymes capable of facilitating the removal of soils from a substrate may also be present in an amount of up to about 10% by wt. Nicholson et al. teach that such enzymes include proteases and amylases. A second layer includes a peracid and an acidity agent in a continuous medium having a melting point in the range of from about 35 °C. to about 50 °C. The release order of the functional ingredients allows for a

optimum bleaching of stains as well as removal of soil. See abstract and col.4, ln.58-60.

Specifically Nicholson et al. teach that the compositions may be in any conventional solid form useful in machine dishwashing and warewashing applications, but are preferably in the form of a tablet having at least two layers. The first layer of a two-layer tablet comprises from about 5 wt. % to about 90 wt. %, of a builder, an effective amount of at least one enzyme selected from the group consisting of a protease, an amylase and mixtures thereof, and a buffering system to deliver a pH in the wash water of about 9.0 to about 11.0. Optionally, a surfactant, a processing aid to allow a high strength tablet to be processed under relatively low compaction pressures, a disintegrant to aid in tablet dissolution and a lubricant to aid processing are present. The selection of buffer in the first layer of the tablet is such that when this layer dissolves, the wash pH lies between about 9.0 and about 11.0 and the level of acidity agent should be such that, after the second layer is released, the wash pH is between about 6.5 and about 9.0. A second layer of a two-layer tablet includes a peracid and a source of acidity in a continuous medium that has a minimum melting point of about 35.degree. C. and a maximum melting point of about 50.degree. C. See col.11, ln.65-col.12, ln.5. Nicholson et al. suggest the use of pectin gum as binders and disintegrants. See col. 11, ln.15-17.

Nicholson et al. do not specifically teach a detergent tablet comprising pectate lyase as recited by the instant claims.

Bettiol et al. teach cleaning compositions comprising a mannanase and a carbohydراse selected from cellulases, amylases, pectin degrading enzymes and/or xyloglucanases. See abstract. Bettiol et al. teach that pectin degrading enzymes are known to provide soil/stain removal benefits when used in washing and cleaning operations, specifically to provide the removal of a broad range of plant and fruit based stains and enhance the realistic item cleaning profile of the detergent compositions. See col.1, ln.29-42. Bettiol et al. teach that pectin degrading enzyme is incorporated into the compositions in accordance with the invention preferably at a level of from 0.0001% to 2%, more preferably from 0.0005% to 0.5%, most preferred from 0.001% to 0.1% pure enzyme by weight of the total composition. See col.23, ln.40-45. Bettiol et al. teach that "pectin degrading enzyme" is intended to encompass pectate lyase (EC 4.2.2.2). See col.23, ln.27. The cleaning compositions can be liquid, paste, gels, bars, tablets, spray, foam, powder or granular. Granular compositions can also be in "compact" form and the liquid compositions can also be in a "concentrated" form. See col.25, ln.37-42.

It would have been obvious, to one of ordinary skill in the art, at the time the invention was made to modify the detergent tablet taught by Nicholson et al. by replacing the enzyme with a pectate lyase as disclosed by Bettiol et al., with a reasonable expectation of success, because the teachings of Nicholson et al. in combination with Bettiol et al. suggest a detergent tablet comprising carbohydراse enzyme in general for use in a similar process of stain and soil removal. Furthermore, one of ordinary skill in the art would have been motivated to modify the teachings of

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Nicholson et al. because Nicholson et al. teach the utility of enzymes capable of facilitating the removal of soils from a substrate in an amount of up to about 10% by wt. and Bettoli et al. teach that pectin degrading enzymes provide superior stain removal, dingy cleaning and whiteness maintenance.

***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Remaining references cited but not relied upon are considered to be cumulative to or less pertinent than those relied upon or discussed above. Applicant is reminded that any evidence to be presented in accordance with 37 CFR 1.131 or 1.132 should be submitted before final rejection in order to be considered timely.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Preeti Kumar whose telephone number is 703-305-0178. The examiner can normally be reached on M-F 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra Gupta can be reached on 703-308-4708. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-872-9309.

PK  
June 29, 2003

Preeti Kumar  
Examiner  
Art Unit 1751

  
YOGENDRA N. GUPTA  
SUPERVISORY PATENT EXAMINER  
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